

# **CLAIMS**

Now, therefore, the following is claimed:

1. A texture mapping system, comprising:  
  
memory for storing a first texture map and a parametric texture map; and  
  
a texture map manager configured to combine at least a portion of the first texture map and at least a portion of the parametric texture map, the texture map manager configured to determine a texture map type for the first texture map and a texture map type for the parametric texture map and to perform a prioritization of the texture map portions based on the determined texture map types, the texture map manager further configured to select, for conversion, one of the texture map portions based on the prioritization and to convert the selected texture map portion into a form corresponding to a form of the non-selected texture map portion.
  
2. The system of claim 1, wherein the first texture map is a parametric texture map.
  
3. The system of claim 1, where the texture map manager is configured to combine the texture map portions and to perform the prioritization in response to a command to combine the texture map portions.
  
4. The system of claim 1, wherein the parametric texture map portion defines a plurality of texels, each of the texels defining a luminosity value that is a function of light direction.

5. The system of claim 1, wherein the texture map manager, in converting the selected texture map portion, is configured to assign a predetermined value to at least one texel of the selected texture map portion.

6. The system of claim 1, wherein the texture map manager, in converting the selected texture map portion, is configured to define a new luminosity value for a texel of the selected texture map portion.

7. The system of claim 6, wherein the new luminosity value is a function of light direction.

8. A texture mapping system, comprising:  
memory for storing a first texture map and a parametric texture map; and  
a texture map manager configured to receive a command to combine at least a portion of the first texture map and at least a portion of the parametric texture map, the texture map manager configured to convert, in response to the command, the first texture map portion into a form corresponding to a form of the parametric texture map portion and to combine the first texture map portion and the parametric texture map portion.

9. The system of claim 8, wherein the first texture map is a parametric texture map.

10. The system of claim 8, wherein the parametric texture map portion defines a plurality of texels, each of the texels defining a luminosity value that is a function of light direction.

11. The system of claim 8, wherein the texture map manager, in converting the first texture map portion, is configured to assign a predetermined value to at least one texel of the first texture map portion.

12. The system of claim 8, wherein the texture map manager is configured to determine a texture map type of the first texture map and a texture map type of the parametric texture map and to perform a prioritization of the texture map portions based on the determined texture map types.

13. The system of claim 12, wherein the texture map manager is further configured to select the first texture map for conversion based on the prioritization.

14. The system of claim 8, wherein the texture map manager, in converting the first texture map portion, is configured to define a new luminosity value for a texel of the first texture map portion.

15. The system of claim 14, wherein the new luminosity value is a function of light direction.

16. A computer-readable medium having a program, the program comprising:

- logic for determining a texture map type of a first texture map and a texture map type of a parametric texture map;
- logic for combining at least a portion of the first texture map and at least a portion of the parametric texture map;
- logic for prioritizing the texture map portions based on the determined texture map types;
- logic for selecting one of the texture map portions based on the prioritizing logic; and
- logic for converting the selected texture map portion into a form compatible with a form of the non-selected texture map portion.

17. A texture mapping system, comprising:

- means for storing a first texture map and a parametric texture map; and
- means for combining, in response to a command, the first texture map and a parametric texture map thereby forming a combined texture map, the combining means configured to convert, in response to the command, the first texture map portion into a form compatible with a form of the parametric texture map portion.

18. The system of claim 17, wherein the combining means is configured to determine a texture map type of the first texture map and a texture map type of the parametric texture map and to perform a prioritization of the texture maps based on the determined texture map types.

19. The system of claim 18, wherein the combining means is configured to select the first texture map for conversion based on the prioritization.

20. A texture mapping method, comprising:  
determining a texture map type of a first texture map and a texture map type of a parametric texture map;  
combining at least a portion of the first texture map and at least a portion of the parametric texture map;  
prioritizing the texture map portions based on the determined texture map types;  
selecting one of the texture map portions based on the prioritizing; and  
converting, based on the selecting, the selected texture map portion into a form compatible with a form of the non-selected texture map portion.

21. The method of claim 20, wherein the first texture map is a parametric texture map.

22. The method of claim 20, wherein the combining and the prioritizing are performed in response to a command to combine the texture map portions.

23. The method of claim 20, wherein the converting further comprises assigning a predetermined value to at least one texel of the selected texture map portion.

24. The method of claim 20, wherein the converting further comprises defining a new luminosity value for a texel of the selected texture map portion.

25. The method of claim 24, wherein the new luminosity value is a function of light direction.

26. A texture mapping method, comprising:  
 receiving a command to combine at least a portion of a first texture map and at least a portion of a parametric texture map;  
 converting, in response to the command, the first texture map into a form compatible with a form of the parametric texture map portion; and  
 combining the first texture map portion and the parametric texture map portion in response to the command.

27. The method of claim 26, wherein the first texture map is a parametric texture map.

28. The method of claim 26, wherein the converting further comprises assigning a predetermined value to at least one texel of the first texture map portion.

29. The method of claim 26, further comprising determining a texture map type of the first texture map and a texture map type of the parametric texture map, wherein the prioritizing is based on the determining.

30. The method of claim 26, wherein the converting further comprises defining a new luminosity value for a texel of the first texture map portion.

31. The method of claim 30, wherein the luminosity value is a function of light direction.